

THE MINES OF ARIZONA

This department is under the direction of Mr. W. E. Defty, the well known mining engineer, who will carefully scrutinize all matters relating to mining in order that only reliable information regarding legitimate enterprises shall find a place here.

The Republican would be pleased to receive information from any part of the state regarding the development of the mining industry. All communications should be addressed: Mining Department, Arizona Republican.

The Metal and Mining Conditions Improving Considerably

Conditions in mining generally have taken a very decided turn for the better and is already showing decided improvements.

The Mining and Scientific Press says: With the gradual readjustment of market conditions many of the mines which suspended operations with the beginning of hostilities in Europe are again producing. Reports from Idaho and Utah are extremely optimistic and the production of silver, lead and zinc is again almost normal. While the copper situation has not been determined, the position of zinc has been strengthened and lead and silver are in a much better position than they were ten days ago.

As regards silver, it is reported to have been sold in considerable quantities in New York, August 22 at 56 cents per ounce, that price being determined by a London quotation made August 21, the first official quotation since the war opened.

In Arizona matters look equally bright, as will be seen by the following letter from one of our smelter companies written a day previous to the London quotation.

American Smelting & Refining Co.
Hayden Plant
Hayden, Ariz.

Dear Sir:

We have the pleasure of advising you that, although London still refuses to bid for New York silver, our company

has been fortunate in making sales to certain foreign governments and to home manufacturers to an extent equal to our receipts.

Therefore, we will settle in full for all silver received August 12th to 19th inclusive at the New York average of our sales, named at 56 1/2 per ounce.

Furthermore, beginning with receipts of August 20 and until further advised we will advance against silver shipments at the rate of 40c per ounce, under the same conditions as per our former letters.

Yours very truly,
AMERICAN SMELTING & REFINING CO.
By J. J. Ormsby, Superintendent.

In addition to the above a large purchase of silver has been made for the coast mint. Word comes from Washington that George E. Roberts, director of the mint has bought 200,000 ounces of silver for immediate delivery at the San Francisco mint. The price was 53 1/2 cents an ounce.

In Arizona properties that temporarily closed down, are again resuming operations. The Commonwealth at Pearce is operating again after a close down of 2 weeks, the improvement in price of silver warranted the resumption of operations. The company put the old force back at work in the mill and mine, and all operations are proceeding and normal conditions resumed as previous to the suspension of work.

At Tombstone the leasers on the old property are now beginning to ship quite a large tonnage of ore, after the announcement that the smelters were again prepared to accept ore for treatment. The leasers have accumulated a large quantity of ore for shipment, for the uninterrupted continued extraction during the period the smelters refused shipments.

Referring to the coppers, the conditions at the properties are certainly on the improve. They are all holding their reduced forces at least, and some of them are gradually taking back some of the old hands at Miami both the day and night shifts in the mine have been increased and also additions to the surface force have been made, of course the latter is mainly on constructive work. At other properties where the forces have only been working half time, the working days have been increased at last for a part of the men. The early movement of the red

quartzite will also be an important factor in strengthening and improving the situation. So weighing all the conditions together, we have in Arizona considerably more to be thankful for. We are not nearly so badly off as some other states and other parts of the world.

Quartzite

It is reported that machinery is being hauled in and installed for the working of the large area of placer ground

around this district. As the water supply is limited, the machines will operate as dry washers or concentrators. The area is well known and has been dand dry washed for over 50 years and a large quantity of gold extracted. The fact of the gold being there is unquestioned, the success of the enterprise rests upon its extraction by this new adopted dry process and we sincerely trust the test will exceed all expectations success will mean much for that part of the country for it has been in a semi-dormant condition for some years. A revival would make the district look like old times, when it used to be busy with quartz and placer mines. It was then known as Tyson's Wells. The country is meritorious and will sooner or later come by its own. The country has suffered considerably by the propositions one of these had the parts of a 40 stamp mill strewn right across the desert from Congress Junction to Quartzite.

Magma Mine

The much reported rich strike in this mine recently, is simply a continuation of the high grade ore short encountered in the upper workings and which consists of hematite, chalcocite and chalcopryite. The ore is certainly beautiful in appearance and wonderful in its being so high grade. On the 800 foot level of the mine, this rich ore body was said to be 3 sets of timbers wide, with scarcely a seam of waste in it. Work was suspended on this level for some time, pending a thorough testing of the ground in all directions by diamond drill holes and it is said extensive disseminated copper areas were proven, after the completion of this work, shaft sinking was resumed and continued to a depth of 1000 feet where it is proven that this large and rich ore body still continues. Down to the 800 foot, the property had fine levels, viz. 200, 400, 500, 650 and 800. The 200 level is an adit 500 long, all ingresses and egress to the mine is made through this working, instead of from the collar of the shaft, as the latter is situated in rather an awkward position on the hill side.

The new concentrator now treating 500 tons of ore per day was erected to treat the ores from the disseminated area and the fines from the shipping ore. The conditions in the mine could not be better and the concentrator is working very successfully.

Superior

William Windsor, who owns four claims close to town, and which adjoin the Lake Superior & Arizona property on the north, reports he has struck a body of high grade ore on his claims and is extracting it for shipment.

In Democratic Times

(Chicago News) Agitated Stockholder: Why haven't you declared the regular quarterly dividend?

Director: We couldn't borrow the money!

"Mineral Rods" Declared Fakes

Whether gold, silver and other precious and useful minerals may be found in the ground by means of mineral rods is a question frequently asked. The latest question of this sort came from a correspondent in Vinemont, Ala., who states that a man from Birmingham has one of these rods for locating minerals, that he claims to be employed by the government and that

the government gets half of what he finds. This expert mineral finder's name is stated to be Wise, which may or may not have significance. The Geological Surveys reply to this correspondent is that while an ordinary compass, or "dip needle" will be attracted to areas of iron, nickel or cobalt, which are magnetic, it will be effected by no other metals or minerals, and that so-called mineral rods are fakes. Anyone claiming to operate a mineral rod on behalf of the government is an impostor and should be let severely alone or reported to the police.

(Additional advice to this should be given. The party believing in such fakes, should also be handed over to the police or passed upon by the competent authority for graduation to the asylum for the feeble minded.)

Owning All the Copper

Anent the drive that was printed in last week's papers about the state owning all the copper. It would be something like the fellow who made himself very objectionable on board the small sailing vessel. The rest on board to show their disapproval and after careful deliberation, told the offender they had decided to present him with the entire canoe and throw him overboard, eventually he was picked up greatly exhausted by a fishing smack. And on recovery of his breath and general composure, he remarked "I fully appreciated the honor conferred upon me by the presentation of that deep and wonderful expanse of water, but I cannot do anything with the devilish thing you know."

Alaska Treadwell

The 1913 report of the Alaska Treadwell Gold Mining Company, Douglas Island, Alaska, shows a net operating profit for the year of \$1,223,428 from 886,957 tons of ore, yielding an average of \$2.6617 or a total of \$2,358,423 and miscellaneous profits of \$69,592. This profit is exclusive of depreciation of property and plant charged off amounting to \$400,297. Dividends amounting to \$1,000,000 were paid.

As will be observed by the above the actual yield per ton of ore, was only \$2.6617.

Gypsum

In 1913 the amount of raw gypsum mined in the United States was close to 2,600,000 short tons.

Arizona Copper

The Arizona Copper Company made an output of 3,300,000 pounds of copper in July, which compares with 2,600,000 pounds in July last year. For the seven months the output was 23,524,000 pounds against 20,800,000 pounds in 1913.

High Cost of Ignorance

Platinum today is about the most precious metal that the ordinary citizen ever sees. Weight for weight, it is two and one-quarter times as valuable as gold. In the days when Pizarro's conquistadors were racing through South America looking for gold and silver and for slaves to mine the same, platinum was worth just nothing at all. Which has led to rather amusing results. Gold and platinum are found together in the sands of the Nagua and Atrato rivers in the western part of the Republic of Colombia. These placer mines have been worked since before the Spanish conquest and for centuries the gold was saved and the platinum thrown away. A metal like iron would have rusted away and disappeared, but platinum endures. Mining companies are looking for it this moment in the dumps where it was tossed 300 years ago, and in one town among these ancient "diggings" the earth excavated for a foundation has yielded enough platinum to pay for the building.

What a building boom there would be in an American city under such conditions! The same story—minus the reward for digging cellars—can be told of many places. Metallurgists of today estimate that one-third of the gold and silver of the great Comstock lode was scattered in waste over the Nevada deserts. Silver has been mined at Laurion, Greece, Athens, for 2500 years, but the most profitable branch of the business in recent times has been mined at Laurion, near Athens. The waste attending the opening of early oil wells and gas wells is known to all.

Cal. Mine Output 26,812,489

SAN FRANCISCO, Aug. 25.—The value of the recoverable gold, silver, copper, lead and zinc produced in the mines of California in 1913 was \$26,812,489, compared with \$26,383,946 in 1912 and \$25,174,677 in 1911, according to an announcement made today by Charles G. Yale of the United States Geological Survey.

Except in zinc there was an increase in the output of all these metals. The output of gold was the largest in thirty-one years, totalling \$20,406,958. Only three times in forty-nine years has the gold output exceeded \$20,000,000.

Cyanide to Be Manufactured in the United States

(By Bascom De Alzugaray)

The stoppage of the foreign supply of cyanide and cyanogen compounds creates a serious situation, not only for the mining industries (extraction of gold and silver), but also for many other electrical and chemical trades using cyanide. The means to meet this temporary difficulty can be easily devised. The raw materials from which cyanogen and its compounds are prepared are abundantly formed in our country. This source of raw products are many and will be briefly reviewed.

A considerable quantity of cyanides escapes from the blast furnaces, as fumes and dust, from which large amounts of potassium cyanide can be recovered by methods analogous to those in practice to purify coal gas, cyanide is produced not only in iron blast furnaces, but also in large quantities in copper and lead furnaces and in a general way in any metallurgical apparatus wherever the nitrogen of the blast acts on hot carbon mixed with alkalis. Fumes and gases issuing from these producers can be condensed

and the cyanide contents separated therefrom.

In the purification of coal gas by hydrated iron oxide, large amounts of cyanide are continually obtained; this has been an old-time source of supply.

The extension of the by-product coke ovens, replacing the wasteful bee-hive ovens, constitute an abundant source of nitrogen products from which large quantities of cyanides can be obtained.

The best sugar industry is another well known source of cyanide which is obtained as one of the by-products by the treatment of residue vinasse. Formerly most of the potassium ferrocyanide from which other cyanogen compounds were made was obtained by fusion of dry refuse animal matter at a red heat, together with potassium carbonate and iron filings. About 3,000 tons of cyanides were yearly produced by this method.

The scarcity of hoofs, horns and scrap leather and the competition of synthetic cyanides have relegated this old method.

Cyanides can also be made from atmospheric nitrogen, by synthesis between carbon disulphide and ammonia; by ammonia, charcoal and alkali and from sulphocyanides.

There are several hundred patents (many of them in operation) which have been applied for during the last 20 years relating to the preparation of cyanides from carbides, from nitriles, etc.

The enumeration of the more practical methods for the preparation of cyanides by these various methods would be too long. These brief notes show plainly the abundance of materials which we have within our reach, to create an independent national industry, which could not only produce all the cyanide required to supply our home industries, but also to reverse our former trading practice of importing cyanides by becoming exporters of our excess of production to other sections of our continent, to Australia, South Africa and to the eastern gold producing countries.

DESICCATED

"She gave Alphonse a withering look."

So runs a line within this book.

And reading on—

His fate to see—

Alphonse dried up immediately.

—Los Angeles Express.

BROAD

Shelby Cullom," said a Springfield veteran, "was a bad man to argue with."

"I argued with him once on war. He accused me of being weakened in my principles. He said I reminded him of old Cal Cal."

"He said Cal rolling along home one evening, he explained, full of apple-jack, and so he said to him:

"Why, Cal, you told me once that you were a teetotaler."

"So Ah is, Mars Shelby," said old Cal, "so Ah is; only, sah, Ah ain't bigoted."

—New York Tribune.

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